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WEEKLY BULLETIN

OF THE OFFICE OF

WESTERN IRRIGATION AGRICULTURE,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume II.

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BUILDINGS ON FIELD STATIONS.

The agricultural appropriation bill, which has recently passed the House, includes an item authorizing the construction of farm buildings and other improvements on field stations of this Department, with a limit of \$1,500 in each instance.

BOUND VOLUMES OF WEEKLY BULLETIN.

With this number, Volume II of the Bulletin is begun. In accordance with the plan outlined in the Introduction (Vol. I, page 1), arrangements are being made to supply each farm with a bound and indexed volume. These will be sent out within a short time, and when received they may be used to replace the separate numbers and the latter either discarded entirely or filed by subject.

FIELD NOTES.

COMPARATIVE WEATHER RECORDS FOR FEBRUARY.

	: San Antonio	: Yuma.	:
Mean Temperature	: 49.9°	: 56.34°	:
Maximum "	: 78.5	: 88	:
Minimum "	: 16	: 27	:
Rainfall	: 6.21"	: 0	:
Average Wind Velocity	: 4.18	: 3.15	:
Days Clear	: 16	:	:
Days partly cloudy	: 10	:	:
Days cloudy	: 3	:	:

16 March, 1912.

FIELD NOTES.

Umatille.

Maximum temperature for the week of March 2, 51, minimum 16; total mileage of wind, 483. The weather is bright, but a slight wind from the northeast keeps the temperature low.

Regular spring work has not yet begun, as the time for tree planting has not arrived. Some work is being done in the way of preparing roads, etc., and in constructing concrete structures for diversion boxes, etc.

Scottsbluff.

During the week of March 9 the weather continued cold and blustery. On the 9th the temperature fell to 9°, with a 3-inch snow preceding the drop.

Bids have been received for lumber for the erection of a new bunk house and an addition to Mr. Pfaender's house.

No field work has been attempted.

Belle Fourche.

During the week of March 9 the maximum temperature was 25, minimum -9, and there was recorded from melted snow a total precipitation for the week of 0.85 inch.

During the week the men were employed the major part of the time in cleaning feed oats, repairing machinery, and hauling feed. Owing to the bad weather, it has been impossible to do any field work.

Huntley.

During the week of March 2 the weather continued cold, with high winds and snow during the latter part of the week. Minimum temperature -5, maximum 51.

During the week the men have been employed in hauling manure to the Worden tract, hauling gravel for concrete work, repairing machinery, and repairing and oiling harness.

FIELD NOTES.

Yuma.

Alfalfa plats A-10-1 to 10-4 have been plowed in preparation for the planting of Mr. Kearney's progeny rows of the Yuma variety of Egyptian cotton. Several plats are being prepared for the general Egyptian cotton experiments and alfalfa plantings.

A map of the farm showing land in crop on March 1 and land available for other plantings will soon be completed.

Mr. McLachlan spent the latter part of the week at Los Angeles, Pomona, and Indio.

During the week of March 2 the maximum temperature was 82, minimum 27.

Truckee-Carson.

During the week of March 2 the maximum temperature was 65, minimum 8. High winds occurred on the 1st and 2nd; averaging 22 miles an hour between 8.00 a.m. and 5.00 p.m. on the 2nd.

Paint has been furnished by the Reclamation Service and the work of painting the ditch rider's house begun.

Work has been commenced on a sewer system for the town of Fallon. It is estimated that the cost of constructing this system will approximate \$9,000.

Work of preparing N 12, 17, and 18 for spring planting was continued.

San Antonio.

On the 4th the grain sorghum was planted on the rotation plats. The Canada peas on A 1 that survived the winter were disked in. Owing to the severe winter some of the varieties did not survive.

This spring 103 persons have been supplied with from 2 to 3 pounds of the better varieties of grain sorghums.

There have also been 38 calls for seed to date that we have not been able to fill because of the supply of seed being limited. Much interest is being shown by farmers throughout the State regarding the growing of grain sorghums since the publication of Bulletin No. 237.

16 March, 1912.

FIELD NOTES.

San Antonio (continued)

The rainy weather during the week made available the time of several men for work in the greenhouse. Many plants were transplanted from germinating flats to pots, including chiefly vegetables and flowering annuals. It has been found by previous trial that such crops as watermelons and cantaloups, if grown at all, must be planted on the black land as early as possible if satisfactory yields are to be obtained. For this reason a limited number are being grown in paper pots under glass for early planting.

Several walks were laid out on the grounds and graveled and the old walks were regraveled.

A very interesting note regarding one of the exotic plants being tried among the farm plantings is the present flowering of the wild peach from China, Amygdalus davidiana. An orchard block of 45 of these trees has been growing for three years. Older trees have also been on the grounds for a number of years, but previous to this season they have always borne their few blossoms early in the winter, and as a result were frozen. These trees are not blooming abundantly, but a few have produced flowers at about the same time as other peaches and appear to be uninjured by the recent frost. This plant has been found to be an excellent stock for the plum and peach varieties in this locality and soil, but the inability to secure seed has curtailed its adoption except in an experimental way.

There were four rainy days during the week of March 9, the total precipitation being 0.34 inch. The temperature has been unseasonably cool, the maximum being 74 and the minimum 36. Much trouble is experienced in getting their seed to come up, owing to the cold weather this spring. Corn planted on the farm on the 19th February began to show through the ground on the 9th March. Many farmers less fortunate have had to replant or have delayed planting until warmer weather. As the usual planting time is about the middle of February, it is probable the season will be nearly a month late.

23 March, 1912.

FIELD NOTES.

Truckee-Carson.

During the week of March 9 the maximum temperature was 61, minimum 9; precipitation 0.04 inch.

Levees have been thrown up, supply boxes set, and drain tile placed on Field D, which is now ready for spring seeding.

Work was completed on Fields N 12, 17 and 19, and these fields are now ready for spring planting. These fields will be used for a garden.

Huntley.

During the week of March 9 the maximum temperature was 16, minimum -27.

The first of the week Mr. Hansen made a trip to Bozeman to confer with the State Experiment Station officials concerning the work of the farm.

The men have been employed in repairing machinery and oiling and repairing harness, as very little outside work could be done.

Yuma.

During the week of March 9 the minimum temperature was 38, maximum 81.

Cuttings have been made of the several varieties of pomegranates planted on the Reclamation Service grounds in 1908. These cuttings will be planted on the pomegranate plat, C 18.

One-eighth of an acre of Egyptian cotton (382-10) was planted on the east end of B 29-30 on the 8th. This is the first of a series of successive plantings.

Fourteen plats have been seeded to alfalfa.

The first rain for several months fell on the 9th, the gauge registering 0.8".

Unatilla.

During the week of March 16 the maximum temperature was 59, minimum 24; wind velocity 492.6 miles.

23 March, 1912.

FIELD NOTES.

(Umatilla, continued)

Some potatoes were planted for early production; a part of them being covered with straw and the rest left exposed.

Some work was done on the cement diversion boxes and the hotbeds were made ready for planting.

San Antonio.

The maximum temperature during the week of March 16 was 79, minimum 34; greatest daily range 40. Only a small amount of rain fell — 0.14" on March 10 and 0.05" March 13.

During the latter part of the week the rotation plats were gone over with hoes. Sudan grass seed was sown in 1/10 acre plats under irrigation and under dry land conditions. Sumac sorghum was planted on the rotation fields.

The corn planted on the rotation fields February 19 and 20 had just begun to show itself well on March 11, a period of three weeks having elapsed between the time of planting and coming up. During this interval the weather was cold and wet the greater part of the time. The appearance of the corn now indicates practically a perfect germination, which it seems is rather unusual under such conditions.

About 1/2 acre of corn was planted on the 14th, comprising the Texas varieties, for Dr. Saunders, and 1-1/2 acres of first generation hybrid corn was also planted for Mr. G. W. Collins.

Messrs. Hastings and Blair made a trip 13 miles north of San Antonio on Monday for the purpose of collecting plants. Three yucca species and two of Nolinias were obtained and planted on the farm. On Friday and Saturday a trip was made to Boerne, where several valuable plants were located. Dormant plants of a few specimens of Arbutus Texana, Styrax platanifolia, Calli-carpa Americana, Prunus seratina, two species of Lonicera and two species of Clematis; also plants of Yucca and Dasyllirion were obtained. Several balled plants of the dwarf palm of that section were also collected. The season is very late in comparison with other years and very few plants were in condition to make herbarium specimens. The herbarium specimens obtained consisted largely of several species of plums of that locality.

23 March, 1913.

FIELD NOTES.

Belle Fourche.

During the week of March 16 the maximum temperature was 38, minimum - 15; precipitation, from melted snow, 0.3 inch.

Messrs. Salmon and Mathews arrived at the station on the 12th.

Mr. Carr reported on the 5th for duty as farm clerk.

During the past week the men have been employed in remodeling machinery, clipping horses, and hauling water. The weather is still such as to prohibit field work.

Williston.

During the week of March 16 the weather was warm and the snow melted fast. Mr. Hawley during the week visited all the farmers "under the ditch" and found very little work being done.

Scottsbluff.

March 16 was the first good warm day on the project for some time. Snow storms and drifting snow made the roads almost impassable, and on the 12th, 13th and 14th the roads were in such condition that the mail carrier could not make his round.

The stock on the range is suffering from both the long continued cold and lack of feed. There has been considerable loss in the sheep feeding pens this winter from piling of the sheep during snow storms.

LETTER HEADS FOR CIRCULARS.

This office has received recently one or two requests to set up on the duplicating machines circular letters to be issued from field stations. It is suggested that in such cases the "copy" should be accompanied by a sufficient number of the farm letter heads for the first page of the circular.

DELTA EXPERIMENT FARM.

The memorandum of agreement between this Bureau and the Delta Association of California for the operation of an experiment farm on the reclaimed lands of the delta of the San Joaquin and Sacramento Rivers, in California, has been signed.

Under this agreement the Association is to furnish about fifty acres of land near Middle River, Cal., equipped with the necessary buildings, teams, and tools, together with a foreman and the labor required for cultivation, and the Bureau is to detail a representative to supervise the investigational work and pay his salary and expenses, and is also to supply such seeds and plants as are not obtainable in the open market.

FIELD NOTES.

Belle Fourche.

During the week of March 23 the maximum temperature was 45, minimum -10; precipitation 0.11 inch.

Other than hauling manure to the fields no farm operations have yet been attempted.

Huntley.

During the week ending March 23 the weather continued cold, with a maximum of 45 and a minimum of 1°, and no field work could be done.

Mr. A. G. Schattenberg reported at the station on the 22nd.

30 March, 1912.

FIELD NOTES.

Williston.

Mr. Hawley reports that the weather is moderating very slowly and little outside work is being done.

Truckee-Carson.

During the week of March 16 the maximum temperature was 60, minimum 16; precipitation 0.20 inch.

Smudge pots of three different makes have been placed in the orchard of A. R. Merritt, ready for heating the orchard as soon as the blossoms begin to open.

The steel collar manufactured by the Johnson-Slocum Company has proved to be very satisfactory to use on horses having chronic sore shoulders. One mare which had been suffering from a sore shoulder while wearing the ordinary leather collar and pad now has shoulders in perfect condition after wearing this steel collar for a few weeks. This collar has also been satisfactory for general use. The Humane collar, which was purchased at the same time as was the steel collar, has not proved to be satisfactory.

The maximum temperature during the week of March 23 was 65, minimum 15.

Some of the poorer alfalfa plats on Field F have been plowed up for the purpose of releveling and re-seeding to get a better stand.

A fertilizer test with onions was planted on the ranch of A. R. Merritt.

The fruit trees in N-10 were sprayed with a crude oil emulsion for the purpose of killing the clover mite (Bryobia pratensis) and a scale known as Lecanium corni.

The experiment is being tried of making cement irrigation boxes. It is found that they can be made almost as cheaply as with lumber and it is believed that they will be much more satisfactory. In case they are found to be satisfactory, specifications for making them will be sent in later for publication in the Bulletin.

30 March, 1912.

FIELD NOTES.

Umatilla.

The maximum temperature during the week of March 23 was 62, minimum 16; total mileage of wind 981.2.

Early potatoes were planted and the ground covered with straw to determine the effect of mulching in hurrying growth for early production.

Three concrete measuring and diversion boxes were put up from slabs of concrete. Wooden boxes have given considerable trouble from leakage and washing of soil and the concrete boxes are to be tried to see if this trouble may be obviated.

The winds are holding off much later than usual this spring. The weather is characterized by cold nights and fairly warm days.

Scottsbluff.

During the week of March 23 the weather continued cold and windy, and on the 24th the thermometer registered 14° below zero. Many hardships are reported among the settlers on account of the snow drifts and bad roads, it being impossible to haul feed for live stock or provisions for the people.

Messrs. Knorr and Holden addressed four school house meetings in the west end of the project during the first part of the week.

The State authorities have given instructions to proceed with the construction of the buildings, and one man was engaged in hauling lumber all week with the exception of one day.

Yuma.

The minimum temperature during the week of March 16 was 37, maximum 75.

Two hackberry trees (Celtis australis, S. P. I. No. 19505), planted on the Reclamation Service grounds in 1908, have been transferred to the office lawn, and several roses propagated from the Rosa banksiae, S.P.I. No. 23038, have been planted around the house and office.

The carob, bamboo, and fig plants which were frozen to the ground during the low temperatures the first part of January, are coming out from below the ground surface or are producing rhizomes.

Mr. McLachlan spent the 15th and 16th in the Imperial Valley.

30 March, 1912.

FIELD NOTES.

San Antonio.

During the week of March 23 the maximum temperature was 82, minimum 36; greatest daily range 34. The first part of the week was warm, but on Friday morning a north-er came up which brought the mercury down close to the freezing point that night. During the latter part of the week 1.14 inches of rain fell.

A number of plants and trees were received from the office of Seed and Plant Introduction and planted to nursery and garden positions for testing.

The several farm orchards were planted last November to Canada field peas. Seed was procured from Mr. Piper, consisting of several varieties under S.P.I. numbers. Of the three varieties most extensively recommended and planted, a very good test of their relative frost resistance was obtained. S.P.I. #18806 was killed completely; #30307 was badly injured by freezing; while 30134 experienced a freeze of 15° above zero and several other less severe low temperatures with no apparent injury. A small planting of this variety has been left to mature seed, to find if the fruit is desirable as a garden product and also to furnish seed for next year's planting. These plantings are making a splendid showing at this time.

MR. SCOFIELD'S FIELD TRIP.

Mr. Scofield expects to leave Washington about May 1 for a short trip to the Pacific Coast. He will probably visit Truckee-Carson, Middle River, Yuma, Umatilla, and Huntley, returning to Washington about the middle of June.

30 March, 1912.

EXAMINATIONS FOR TRANSFER TO SCIENTIFIC STAFF OF BUREAU.

Under date of March 21, 1912, the Committee on Efficiency and Promotions promulgated an order to the effect that any clerk or employe below the grade of Scientific Assistant employed in the Bureau of Plant Industry who contemplates taking an examination for the position of Scientific Assistant must declare his intention of fitting for such examination one year prior to the date of the examination. Those who desire to prepare for such an examination are advised to signify their intention in writing to Dr. Galloway one full year in advance. This statement should outline definitely the course of study which the applicant proposes to take in order to qualify for the position of Scientific Assistant. This declaration of intention does not relieve the applicant from the necessity of applying next year to the Civil Service Commission for the necessary examination papers.

6 April, 1912.

GRAIN SORGHUM EXPERIMENTS AT SAN ANTONIO.

Cooperative experiments with grain sorghums and broomcorn are being continued on the San Antonio Experiment Farm. Three pounds each of seed of fourteen varieties were furnished by the office of Grain Investigations for planting in connection with midge evasion experiments. The first planting was made about February 20. The second and later plantings were to be made at intervals of a week or ten days, but unfavorable climatic conditions somewhat prolonged this interval. During February Mr. Hastings was furnished with 200 pounds of seed of Dwarf milo, 160 pounds of Sudan durra, and 60 pounds of dwarf kafir for distribution among cooperating farmers in the vicinity of San Antonio, and from this seed 103 cooperators were supplied and 38 applicants were denied seed because the supply had run short.

THE ALFALFA GALL MIDGE.

Bureau of Entomology Circular No. 147, issued under date of April 6, 1912, calls the attention, especially of alfalfa growers in the southwestern portion of the country, to the appearance of the alfalfa gall midge (Asphondylia miki Wachtl) in the United States. While it is not known that the insect has so far caused any injury to the crop, it is thought advisable to direct attention to its presence, so that it may be carefully watched.

A copy of this circular is being sent to each of our field stations.

6 April. 1912.

FIELD NOTES.

Belle Fourche.

During the week of March 30 the major part of the time of the men was used in repairing buildings and machinery and in repairing the dam on Deadman Creek.

The maximum temperature for the week was 70, minimum 13.

Meteorological Records for the Month.

Mean temperature.....	17.61°
Maximum temperature.....	70.00°
Minimum temperature.....	-15.00°
Precipitation.....	.81"
Average wind velocity.....	7.00 mi.

Yuma.

The minimum temperature during the week of March 23 was 38, maximum 84.

Plat C 36 has been planted to bamboo. The plants used for this one-half acre planting were taken from the bamboo nursery rows on A 13-1 and consist of Dendrocalamus strictus and Bambos aruninaceae plants received from Washington in February, 1911. This planting should test the adaptability of these two bamboo species to high water-table conditions.

Plats C 39-40 have been seeded to Peruvian alfalfa. Pure seed of the tall strain of this alfalfa, which grows at a lower temperature than ordinary alfalfa, was obtained from Mr. Cloud in Yuma Valley. Row plantings of Peruvian alfalfa were made on B 31-32 for seed production. The area was divided longitudinally into five equal parts and alfalfa planted in rows 7, 14, 21, 28, and 35 inches apart. A similar planting of ordinary alfalfa was made on C 29-30.

Mr. L. L. Zook spent the 21st and 22nd at the farm, selecting seed corn and arranging for a few midsummer corn experiments.

Mr. McLachlan visited the farmers in the Imperial Valley who are intending to plant Egyptian cotton.

6 April, 1912.

FIELD NOTES.

Scottsbluff.

Up to Friday night of the week of March 30 was the first good weather of the winter. On that night it again turned cold and by Sunday morning the ground was covered with about six inches of snow.

During the week cement foundations for the new buildings were put in.

On Thursday one of the horses belonging to the State was taken sick with azoturia. After working with it until Sunday, the veterinarian gave up hope and the animal was shot.

San Antonio.

The maximum temperature for the week of March 30 was 76.5, minimum 36.5. On the 24th there was a light frost which killed the tender tips of the young corn and milo. The total precipitation for the week was 0.33 inch.

The latter part of the week a collecting trip in the interest of the herbarium was made along the San Antonio River near the farm, and several species of plants were found in flower.

Three plants of Washingtonia fillifera robusta were obtained from the local nurseryman and planted to grounds. This palm is probably the most stately and attractive of any of the hardier sorts adapted to this locality.

Nearly 75 per cent of the Persian walnuts in the orchard on E 3 were killed by the severe winter, while the younger trees from buds of the first season on Juglans nigra were all killed. These, however, were under irrigation during the growing season and perhaps were damaged most by the early freeze in November, not having well matured wood.

Melons and cantaloups were transplanted from greenhouse to garden.

All of the corn, milo, and sorghum was cultivated during the week and the fallow plats, soon to be planted to cotton, were harrowed.

On the 28th one-tenth acre of Rhoades grass was planted on D 3, and on the 29th the third successive planting of Triumph cotton was made on B 4.

13 April, 1912.

FREIGHT SHIPMENTS.

All freight shipments to persons in the Department should be addressed to Mr. C. B. Lower, Chief of the Supply Division, and marked on the outside "For Mr....., Bureau of Plant Industry", or the like, and the bills of lading should be made out accordingly and forwarded to Mr. Lower.

WEEKLY REPORTS.

With the opening of the crop season closer attention will be paid in this office to the weekly report feature of the work. For this purpose a card "follow-up" system has been installed, so that when reports are not received promptly, the farm superintendents may be reminded of the delinquencies. The use of the present blue receipt card will be continued, but in cases where the weekly reports are not received in due time the blanks will be filled out to call attention to such non-receipt.

These reports are essential and important, not only for publication in the Weekly Bulletin, but as a means of keeping in touch with the work on the field stations from week to week, and it is requested that special effort be made to have them come in promptly.

C. S. SCOFIELD.

FIELD STATIONS.

Memorandum for Heads of Offices No. 9, dated April 8, 1912, reads as follows:

"The following paragraphs relative to field stations and outside laboratories of this Bureau are submitted for your information.

Definition of a Field Station.

A field station may be defined as a permanent place outside of Washington, D. C., where Bureau field and laboratory investigations are conducted under the direct super-

13 April, 1913.

Field Stations (continued).

vision of one or more resident representatives, who are employees of the Bureau, and may be under the control of one office, or of one office cooperating with other offices of the Bureau, with other branches of the Department, with State experiment stations, or with other agencies.

Names of Field Stations.

Each field station should have a distinctive and descriptive name; for example, Minidoka (Idaho) Reclamation Field Station; Akron (Colorado) Dry Land Field Station; Biggs (California) Cereal Field Station, etc.

Outside Laboratories not Classified as Field Stations.

Field stations would not include seed testing laboratories, grain standardization laboratories, or other laboratories of a similar character conducted at State experiment stations or independently, which do not involve operations on the land."

APPROPRIATION

For Western Agricultural Extension, Defined.

Memorandum for Heads of Offices No. 11, dated April 9, 1913, reads as follows:

"For the guidance of the Committee on Projects and the Committee on Cooperation and Outlying Stations, and for the information of the Bureau officers, it is desirable to indicate the lines of work to which the following clause applies:

'For investigations in connection with the utilization of lands reclaimed under the Reclamation Act, and other areas in the arid and semi-arid regions.'

1. The phrase 'investigations in connection with the utilization of lands reclaimed under the Reclamation Act, and other areas in the arid and semi-arid regions' authorizes work either on Reclamation projects or elsewhere in the arid and semi-arid regions.

2. The expression 'utilization of lands' means the turning of lands to profitable use, and the specific mention not only of the Reclamation Act but of 'other areas in the arid and semi-arid regions' implies authority for

13 April, 1912.

Appropriations (continued).

such investigations as bear upon the most effective utilization both of lands reclaimed by irrigation and of adjacent or included non-irrigable lands.

3. This clause confers authority for testing various crops and methods, where such testing is not merely for the purpose of securing new or improved varieties or methods, but for the purpose of determining what varieties of crops or what methods of production are best adapted to each section. Crop rotation, tillage, and seeding experiments, and such measurements and determinations as may be necessary are legitimate lines of work to be undertaken, and the maintenance of general farms for carrying on such work is proper. In this connection it would also be proper for the office of Western Agricultural Extension to provide facilities upon these farms for other offices having authority for specific investigations which bear directly upon the agricultural problems of the irrigated regions."

FIELD NOTES.

Huntley.

The maximum temperature for the week ending March 30 was 62, minimum 21.

During the first of the week unfavorable weather prevented field work, but during the last two days Field H (dry land) was disked. The remainder of the time was spent in repairing machinery and buildings.

Williston.

Mr. Hawley reports fine weather during the week of April 6. The ice went out of the Missouri River during the week and high waters prevailed. The river was seven or eight miles wide in places, and several houses were washed away. Spring work is opening up and Mr. Hawley is busy laying out new ditches and fields for water.

13 April, 1912.

FIELD NOTES.

Umatilla.

The maximum temperature for the week of March 30 was 71, minimum 23; wind velocity 930 miles.

Several shipments of fruit trees were received and set out, the principal part of this work being replacement of trees and plants lost last season. Some ornamentals were received and placed in the ornamental nursery and on the grounds about the buildings. The weather has been favorable and rapid growth has started on grain and alfalfa.

Truckee-Carson.

The maximum temperature for the week of March 30 was 70, minimum 24.

A very uniform stand has been secured from the seeding of alfalfa sown last summer on the terrace in front of the office and laboratory buildings. It was given the first irrigation of the season during the week.

A large number of ornamentals were received from Washington. A number of these were planted around the buildings and the rest in nursery rows.

About fifty plants of S.P.I. material were received from the gardens at Chico and planted in nursery rows.

The annual distribution of seeds and cuttings was made during the week. A number of requests for seed or cuttings of the Russian oleaster were received during the spring from persons residing outside of Nevada.

March has been cold as compared with previous years and as a result no blossoms have as yet come out on the fruit trees.

Belle Fourche.

During the week of April 6 the maximum temperature was 75, minimum 22; precipitation 0.05.

During the week operations in the field were commenced. Fields A and series I on field H have been dragged; the grain plats on Field B have been double disked and harrowed; series VII, VIII, and IX on field G have been spring toothed; series II on field F has been spring toothed, and series III and IV on the same

FIELD NOTES.

Belle Fourche (continued).

field double disked. The work of harrowing fields O and P has been partially completed.

Digging the ditch for the pipe line across field A has been finished and the ditch is ready for the placing of the tile.

Yuma.

During the week of March 30 the maximum temperature was 87, minimum 41.

Mr. McLachlan spent the fore part of the week in the Imperial Valley.

Arrangements have been made through Mr. Brand's office with two persons for five-acre plantings of ramie in cooperation with the Department.

Twelve Cyperus papyrus plants, S.P.I. No. 29484, were received from Mr. Brand and planted under a number of soil moisture conditions.

Hemp in rows 5 feet apart for seed production was planted on D 40. A thick seeding of hemp for fiber production was planted on one-half of D 39, the remainder of the plat being planted to milo. Sumac sorghum was planted on D 42 to act as a buffer crop for Mr. Kearney's Egyptian cotton progenies.

Two loads, containing 240 seedling date palms, have been hauled from the Reclamation Service barracks in Yuma. These have been heeled in temporarily until they can be inspected by the County Horticulturist.

Scottsbluff.

The early part of the week of April 6 was devoted to cleaning grain and hauling manure. By Wednesday the ground was dry enough to permit field operations on the dry land. All the teams were put on the dry land rotation plats and this work was pushed through.

On Thursday the field peas were seeded on the dry land rotation plats. On Friday seeding wheat on the dry land plats was begun, but high winds in the afternoon prevented further work. This seeding was finished Saturday morning. Saturday morning a harrow was started on the irrigated rotation plats, and one plow began to turn stubble.

13 April, 1912.

FIELD NOTES.

San Antonio.

During the week ending April 6 the maximum temperature was 80, minimum 38; greatest daily range, 42. The total precipitation was 0.3 inch.

The month of March was unusually cool, the mean temperature being 55.4, which is 9.9 degrees lower than the mean temperature for March last year, and 10.4 degrees below the average mean temperature for four years.

On the 2nd the cotton on the rotation plats was planted, the Acala variety being used this year.

On account of the very poor stand of milo secured from the first planting on the rotation plats, about March 4, the milo was replanted April 2.

The oats on the rotation plats have made a very rank growth during the last month and on some plats are beginning to lodge some.

The corn on the rotation plats was cultivated for the third time.

Messrs. Hastings and Blair made a two days collecting trip covering territory between San Antonio and San Marcos, returning several coveted flowering specimens. The native *Aesculus* which is at present being treated with much attention by Dr. Sargent was found in flower at the heads of the San Marcos and Canal Rivers. Supposedly two or three species exist here, though only one recognized species.

A shipment of the native Lair plum of northwestern Kansas was received from Mr. E. Bartholomew, of Stockton, and planted on the sandy region at the south end of the farm with the plum collection, for breeding experiments.

Plants of tomatoes, water melons, canteloups, and cucumbers were transplanted from the greenhouse to the garden.

The offices of Dry Land Agriculture and Grain Investigations have renewed the publication of their weekly newsletters.

13 April, 1912.

COMPARATIVE WEATHER RECORDS FOR MARCH.

	Truckee- Carson.	Yuma.	Umatilla.
Mean temperature	40 90°	59 21°	38 6°
Maximum "	70 00°	87 00°	71 0°
Minimum "	9 00°	33 00°	14 5°
Rainfall	37"	.89"	.495"
Aver. wind velocity:	5 60 mi	3.87	4 53
Days clear	13	12	14
Days partly cloudy:	7	17	11
Days cloudy	11	2	6
	Huntley.	San Antonio:	
Mean temperature	18 7°	55 4	
Maximum "	62 0°	82 0°	
Minimum "	-27 0°	36 0°	
Rainfall	.41"	2 3"	
Aver. wind velocity:	114 2mi	3 5	
Days clear	12	5	
Days partly cloudy:	13	11	
Days cloudy	6	15	

MESS FUNDS.

It has become evident that the establishment of a reserve fund for each farm mess is necessary. Such a fund is needed for purchasing any equipment that can not be bought with Government funds, fuel or other supplies in quantity sufficient for more than one month, cows or chickens, and any other equipment or supplies that could not equitably be charged in a lump against the current personnel of the mess. Where a flat rate is used, this reserve can be accumulated by advancing the rate slightly till a sufficient amount has been secured, when it can be dropped to the level of the expenses until the fund is drawn upon, when it can be advanced again until the reserve is brought up to the normal level. Where monthly assessments are made, the same result can be secured by adding a small sum to the assessment required to meet expenses.

13 April, 1912.

Mess Funds (continued).

It is therefore suggested that such a fund be established by each farm mess, the rates to be so fixed that a reserve of about \$100 may be secured in about one year, and that the reserve thereafter be maintained at about that figure. Where the average number of participants in the mess is less than eight for the entire year, the period for accumulating the \$100 might be correspondingly extended.

C. S. SCOFIELD.

FIELD NOTES.

Huntley.

Weather conditions during the week of April 6 were for the most part favorable for field work. Field H (dry land) has been double disked and harrowed, and field K has been harrowed.

Truckee-Carson.

The maximum temperature during the week of April 6 was 74, minimum 22.

A shortage of water caused by the light snowfall in the mountains during the past winter is already being felt. The rotation system of delivering water has been put into effect and it will probably help out considerably in the conservation of the supply.

During the past season considerable land has been leveled. Most of this has been designated as field D; the remainder has been added to field N. A general survey of the farm was made during the week and a new map is being drawn so as to include this new leveled land.

The speltz and hull-less barley sown on D-1, 2, 6, & 7 show evidence of producing a uniform stand. These fields were given the second irrigation of the season.

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20 April, 1912.

SEED DISTRIBUTION.

Memorandum for Heads of Office No. 14, dated April 7, 1912. reads as follows:

"Complaints are being received from time to time from Members of Congress to the effect that they are being annoyed by requests for seeds or plants from individuals who have been advised by our men that the proper way to get seed from the Department is by making application to their Representative or Senator. Some Members of Congress have as a result been overwhelmed with applications, particularly for special crop seeds and plants, such as improved varieties of cotton, etc., of which but small allotments are made, with resulting embarrassment to them and to the Bureau.

"To avoid a recurrence of this, it should be clearly understood that applicants for such seeds or plants should not be referred to Members of Congress. Their requests should be handled directly by the office concerned, whether the application is by letter or through personal inquiry. Please see that your field men as well as those stationed in Washington receive the necessary instruction on this point."

THE NAME OF THE OFFICE CHANGED.

In order to provide for specific mention of the name of this office in the appropriation act, it has been proposed to insert the words, "western irrigation agriculture", in the clause of the appropriation bill which covers the work of this office, so that the clause will read: "For investigations in connection with western irrigation agriculture, the utilization of lands reclaimed under the reclamation Act, and other areas in the arid and semi-arid regions * * * * *".

In connection with this proposed change in the appropriation act, it is proposed to change the name

20 April, 1912.

Name of Office Changed (continued).

of the Office of Western Agricultural Extension to the Office of Western Irrigation Agriculture. This change is to go into effect officially the first of July, provided the proposed amendment to the clause in the appropriation act is accepted by Congress, and the name will be changed on the stationery and elsewhere in connection with our work as rapidly as opportunity offers after that date.

C. S. SCOFIELD.

FIELD NOTES.

Belle Fourche.

The long drouth was broken April 12 by a rain of 2.05 inches, and the precipitation for the week amounted to 2.17 inches.

The maximum temperature during the week of April 13 was 78, minimum 31; average wind velocity April 13, 24.7 miles per hour.

The planting of the grains in the dry-land rotation experiments and in Mr. Salmon's variety tests has been completed. Some leveling has been done and the disking of fields O and P half completed. Laying tile in the ditch across field A is also about half finished.

Yuma.

The following plats were planted during the week ending April 6:

D 26, hemp and milo; the hemp mostly for seed production with a part thick for fiber production; D 36, dwarf milo; D 41, duplicate planting of Mr. Kearney's 382 progenies; D 43, Mr. Kearney's 370 progenies; D 44, sumac sorghum; D 45, north half, to Mr. Kearney's 310 progenies; D 46, dwarf milo; C 41, east half, to bulk 382-0-50.

A covered seed bed 5' x 40' has been constructed for propagating ramie plants. This work is under the supervision of Mr. L. E. Dewey, in Charge of Fiber Plant

Yuma (continued)

Investigations.

Mr. W. E. Wilsie, Horticultural Commissioner of Imperial County, visited the farm and inspected date palms for scale.

San Antonio.

The maximum temperature for the week of April 13 was 85, minimum 52. A precipitation of 1.62 inches during the week prevented field operations until Saturday.

Mr. E. B. Brown was at the station the latter part of the week, attending to his corn plantings.

Williston.

Mr. Hawley reports continuous rains during the latter part of the week of April 13, ending with a very heavy fall of snow. The ground is very wet, which gives promise of good crops on the uplands.

Mr. Hawley spent the first of the week among the farmers on the Big Muddy, urging them to test all seed grain and advising them in other directions.

Scottsbluff.

The week of April 13, with the exception of Wednesday, was spent in preparing the land for seeding. Wheat was seeded on the irrigated rotation plats, on the fall irrigated experimental plats, and on the variety plats.

On Wednesday it rained and on Saturday a driving rain and snow storm continued throughout the day.

Brome grass has not yet been seeded on the dry land, it being necessary to wait for a day with but little wind.

27 April, 1912.

FIELD NOTES.

Huntley.

The weather during the first of the week of April 13 was favorable to field operations, but outside work was stopped on Friday by a rainfall of 1.25 inches.

Maximum temperature during the week 78, minimum 32.

Disking and harrowing in field H (dry land) was finished and the ground is now in condition for seeding. Alfalfa in fields A and C has been disked and harrowed, and some work has been done on field K in preparation for planting.

Truckee-Carson.

The maximum temperature during the week of April 13 was 76, minimum 22, and 0.33 in. precipitation was recorded.

Nine varieties of strawberries were planted at the Ferguson ranch and Indian School.

Orchard heaters were used in the orchard of Mr. A. R. Merritt on Wednesday, Thursday, and Friday nights. Only the block of peach trees were heated, as the apple and pear trees were not yet in bloom. The following results of the test were noted:

On Wednesday night, with an average temperature outside of 30.2, the temperature in the heated area averaged 31.6. On Thursday night, with an average temperature outside of 27.5, the temperature in the heated area averaged 29.92. On Friday night, with an average temperature outside of 24.625, the temperature in the heated area averaged 29.18.

The following crops were planted on various plats of fields D and F: Rape, mangel, wurzel, stock beets, clover varieties, field peas, and the fertilizer test of sugar beets.

27 April, 1912.

FIELD NOTES.

Umatilla.

During the week of April 13 the maximum temperature was 76, minimum 31.5; total wind movement 810 miles. Some work was done on the distribution system and on fields B-3, 4, 5, and C. Some additional nursery and ornamental plants were received and set out, and missing strawberry plants in A 3 were replaced.

Yuma.

The maximum temperature during the week of April 13 was 85, minimum 36, the latter occurring on the morning of the 13th, when a light frost was reported by some of the settlers in the Valley.

Cotton planting has been continued on the following plats:

D 22 & 20, natural hybrids; D 22, small miscellaneous plantings; east half of C 20, hybrids; C 21 & 22, alternate row test of 382-10 and Sacaton varieties.

Successive one-fourth acre plantings of 382-10 have been made in five to eight day intervals on B 25 to 28.

One-fourth acre of ramie roots were planted on Robert Pirtle's farm.

Stipa seed received from Mr. Brand was planted in a shaded seed bed by Mr Dewey as follows:

S.P.I. No. 30606, Stipa elegantissima; 30607, S. gigantea; 30608, S. logascai; 30609, S. pennata; 30610, S. splendens; 31559, S. tenacissima.

Scottsbluff.

During the week beginning Sunday, April 14, some of the land on the irrigated rotation plats was disked and floated and made ready for seeding the oats. Some of the land is ready for planting sugar beets, but this work has been deferred on account of the cold weather. Rain fell all day Saturday, April 20.

27 April, 1912.

FIELD NOTES.

Belle Fourche.

During the week ending April 20, it was impossible to do any field work until Saturday, on account of the rains of the previous Saturday and Sunday.

The siphon across Field A and the water and drain systems are approaching completion.

Two bushels of black walnuts were planted in the nursery, and 150 Limber pine plants have been transplanted to the dry land forestry plat.

Maximum temperature for the week 60, minimum 29; precipitation, .05 inch.

MR. FARRELL TRANSFERRED.

Arrangements have been approved for the transfer of Mr. F. D. Farrell from the office of Grain Investigations to the office of Western Agricultural Extension, to take effect June 1, 1912.

Mr. Farrell will be attached to the Washington office and will act as a traveling Field Assistant, and in addition to general supervising work will give particular attention to the rotation experiments on the San Antonio, Scottsbluff, Belle Fourche, and Huntley Experiment Farms.

VOUCHERS FOR TRAVEL.

Several Form 4 vouchers have recently been returned to this office by the auditors for the insertion on the last page of the required statement regarding travel performed upon mileage books or transportation requests. This requirement should not be overlooked. In the blanks provided upon the last page, every Form 4 voucher should bear a statement of travel performed upon transportation request or mileage books, or there should be written, across the face of this blank, a statement to the effect that no such travel was performed.

4th May, 1912.

FIELD NOTES.

Yuma.

Minimum temperature during the week of April 20, 41, maximum 86.

Field A 10-1 to 10-4 was planted to Mr. Kearney's 382 Egyptian cotton selections. The cotton seed planting for the season is about completed.

Four hundred and thirty-two Medicago sativa tunetana and a few Medicago cancellata plants from the Department greenhouse were set out in the alfalfa nursery.

A concrete check was constructed in the A series ditch. All the ditch checks, drops, and some of the gates now consist of concrete. A number of plats on the south side of the farm were re-leveled and work continued on the fill in the north-west corner.

Mr. McLachlan visited the Imperial Valley during the latter part of the week and supervised the planting of his cotton on the California sub-station near Meloland.

Umatilla.

Maximum temperature during the week of April 20, 71, minimum 27; average wind velocity, 6.06 miles per hour.

During the week the last work was done on the cement diversion boxes. The distribution system is now arranged in such a manner that accurate measurement can be made of the amount of water used on the various fields, and in most cases the amount used on the respective subdivisions can be accurately gauged. The concrete boxes are a great improvement over the wooden structures, which leaked badly when allowed to dry out for a day or so. The loss of water, and especially the washing of the soil, which was so troublesome about the old structures, is eliminated by the use of concrete boxes.

Field A 2 has been plowed for putting into garden. The trees in Field C and D 5 have been hoed

4th May, 1912.

FIELD NOTES.

(Umatilla continued).

around to rid them of the rye which was sown last fall. Also D 3, the strawberry ground, has been cleaned of the rye. The strawberries are not doing well this spring, the plants continuing small and making but slight growth.

San Antonio.

Maximum temperature during the week of April 20, 87, minimum 45, greatest daily range 32. There was very little rain, the total precipitation being 0.03 inch.

Practically the entire farm was cultivated. A part of the corn on the rotation plats was thinned.

The oats are heading out, but they are going to be difficult to harvest, on account of lodging considerably. The lodging does not seem to be due to rust (but little rust being observed), but to the weakness caused by the stalks growing so large and soft during the damp weather of the spring.

Seven 1/10 acre plats were planted to sumac sorghum on C 4, April 15, for the purpose of determining the best rate of seeding for this section. One plat was planted at each of the following rates per acre: 174, 153, 121, 88, 52, 37, and 26 lbs.

The farm roads were regraded the latter part of the week.

Representatives of the San Antonio Chamber of Commerce, the Real Estate Exchange, and the San Antonio "Express" visited the station on the 17th for the purpose of making an inspection and arranging plans for these organizations to keep in closer touch with the work being carried on.

Seeds of 25 various trees and shrubs were stratified in flats in the greenhouse for propagation. Two dozen cypress flats were constructed for use in greenhouse work. It is now becoming necessary to use one laborer the greater part of each week in irrigating and caring for the grounds and nurseries.

All orchards, nurseries, and the garden were cultivated during the first of the week.

4th May, 1912.

FIELD NOTES.

Truckee-Carson.

During the week of April 20 the maximum temperature was 61, minimum 22; rainfall, 0.27; average wind velocity, 6.4 miles per hour.

Orchard heaters were used two nights in the orchard of Mr. A. R. Merritt.

Nine varieties of strawberries were planted on the ranch of Mr. W. W. Cogswell, near Fernley.

Considerable work was done in rearranging the lawns and planting ornamentals.

Mr. Fulkerson left on Wednesday for Pyramid Lake, where he was to do some work on the native Amygdalus andersonii, crossing it with some of our commercial varieties of peaches and plums.

Huntley.

During the week of April 20 it was impossible to do much field work because of stormy weather. The ground was dry enough to work on Saturday and the wheat plats in Field H (dry land) were planted.

Mr. Cole, of the office of Dry Land Agriculture, was at the station from Tuesday to Saturday.

Scottsbluff.

During the week of April 27 the oat and barley varieties were seeded and also the oats on the irrigated rotation plats. On Saturday the planting of sugar beets was finished. The best ground was in splendid condition.

The wheat on the dry-land plats is coming up nicely. The winter wheat on the continuous cropping plats suffered considerably during the winter, plat A being nearly killed out.

The alfalfa is still very backward, some of the fields having not yet started to "green up". Last year by the first of May the alfalfa stood about six inches high.

4th May, 1912.

EGYPTIAN COTTON SOLD.

The crop of Egyptian cotton grown experimentally in the Southwest in 1911 has been sold. There were 36 bales all together, of which 6 bales were grown by cooperating farmers. The following statement gives the significant dates concerning the movement of the cotton from the gin to the manufacturer.

1911.

Dec. 11..... Ginning at Yuma finished.
20..... Samples mailed from Yuma.
23..... Ginning at Sacaton finished.
23..... Samples mailed from Sacaton.

1912.

Jan. 5)
6)... Eight samples, representing 36 bales,
17) sent to various manufacturers.
18)

17.... Bid of Clark Thread Company received.
This proved to be the highest bid and
was from 20-1/8 to 20-7/8 cents per
pound.
31.... Bid of Clark Thread Company accepted.
Feb. 10.... Cotton shipped from Yuma.
15.... Cotton shipped from Sacaton.
Mar. 11)... Clerk in Charge of Indian Warehouse,
12) New York, acknowledged receipt of 10
bales from Yuma and also cotton from
Sacaton.
Apr. 22.... Clark Thread Company wrote that check
for \$3,643.60 had been sent to Clerk
in Charge of Indian Warehouse.
30.... John C. Hennessy, Clerk in Charge of
Indian Warehouse, transmitted check
for \$449.60 to cover 6 bales belong-
ing to farmers in the Southwest, and
check for \$577.54 to cover 6 bales
the property of the Department of
Agriculture.

4th May, 1912.

(Egyptian Cotton Sold, continued).

The following table shows the difference between shipping weight and receiving weight on the 12 bales of cotton.

Bale Number.	Shipping Weight (Gross).	Receiving Weight (Net).	From.	Gain.	Loss.
25	527	555	Yuma	28	
26	597	455	"		142
27	460	522	"	62	
28	467	459	"		8
29	433	425	"		8
30	220	209	"		11
31	523	518	"		5
32	604	587	Sacaton		17
33	413	398	"		15
34	565	592	Yuma	27	
35	365	353	"		12
36	473	466	"		7
	5647	5539		117	225
	5539				117
	108		Net Loss.....		108

FIELD NOTES.

Belle Fourche.

During the week of April 27 the maximum temperature was 70, minimum 28; precipitation, a trace.

The surviving 150 plants of Limber Pine were transplanted to the dry-land forestry plat. For the purpose of shading the Scotch and Austrian pines in the nursery, a plant shade 25 x 100 feet has been constructed, and in this space about 8,000 pine seedlings have been set out. These seedlings were planted in June, 1911, and have made a good growth.

The new roads on the grounds have been laid out and the ground has been disked and harrowed preparatory to planting the lawns.

Truckee-Carson.

During the week of April 27 the maximum temperature was 72, minimum 22; precipitation, 0.35 inch.

The Reclamation Service officials have issued a circular cautioning the farmers on the Project against seeding new fields of alfalfa. This has been done on account of the threatened shortage of water. It is estimated that no water will be going down the Truckee or Carson Rivers after July 1.

Eleven varieties of strawberries were planted at the Indian School and on the ranch of Wallace Ferguson.

The fertilizer tests of potatoes were put in on the ranch of Wallace Ferguson and at the Indian School.

The heating plant for the greenhouse arrived and is being installed under the supervision of a mechanic furnished by the company supplying the plant.

Huntley.

During the week of April 27 the weather conditions were favorable to field work and ground was prepared for seeding.

Grain and brome plats in the dry-land rotation field; wheat and oats in the irrigation rotation plats; and oats, barley, peas, and brome plats in the dry-land rotation fields have been planted.

4th May, 1912.

(Huntley continued).

Of the fruit trees planted last season, 56 apples, 24 plums, and 21 cherries have died, and trees have been ordered to replace them.

San Antonio.

During the week of April 27 the maximum temperature was 90, minimum 53; greatest daily range, 31. Very little rain fell, the total precipitation being 0.09 inch. The entire week was favorable to field work, the men being kept busy cultivating and hoeing. The remainder of the corn was thinned and the grass and weeds cut from the cotton and sorghum. All of the corn and sorghum plats were cultivated.

Considerable injury has been done to the cotton by cutworms and some time was spent in poisoning these insects. A poisonous bait was prepared by mixing one pound of Paris green with a bushel of wheat bran, and the whole made into a mash by adding eight gallons of water, to which had been added one-half gallon of cheap molasses. This was distributed along the rows where the damage was being done.

The two species of Chinese dates, Zizyphus oxyphalla (S.P.I. No. 28130), and Z. mauritiana (S.P.I. No. 28129), which made vigorous growth in the nursery rows last season, are again sending out shoots after being frozen to the ground during the winter. Zizyphus sativa was uninjured. It was hoped that these would make desirable stock for propagating the edible Chinese dates.

Friday, the 26th, was arranged as Visitors Day with special regard to the Bexar County Farmers' Institute and the San Antonio Chamber of Commerce. A good number of men interested in agriculture called during the day.

Mr. Hastings left Saturday for Washington. Messrs. Kinsler and Anders were at the farm Monday.

11 May, 1912.

Umatilla.

During the week of April 27 the maximum temperature was 69, minimum 32.5; wind velocity, 3.75 miles per hour.

Twenty-eight additional varieties were added to the variety test of strawberries, the old plantings were hoed out, and smudge pots put out to use in the event of frost. Only fuel oil could be secured for this purpose, but an endeavor will be made to save the crop. At best the yield will be light, as the plants have not done well. Frost usually occurs during the blossoming season, however, and it is desired to get some preliminary work in frost fighting done this season if possible. So far, there has been much less frost than usual.

A 300-ft. cement pipe line was partly laid during the week to take the place of a flume. This flume, which is made of 1' cedar lumber, is giving away in several places at the beginning of this its fourth year's use.

Some of the alfalfa has been irrigated. That which has not received water is very dry. Some thin alfalfa has been reseeded.

There has been much less wind and more showers this spring than usual.

Yuma.

During the week of April 27 a large clump of Chinese wild rice was received from the Department greenhouse and planted in shallow standing water near the gas machine house.

The planting of date palm seedlings on the north side of the farm has been continued.

Mr. V. L. Wildermuth, Expert in the Bureau of Entomology, visited the farm on Monday. The following day Mr. Wildermuth and Mr. Peterson searched a

11 May, 1912.

FIELD NOTES.

(Yuma, continued).

large number of alfalfa fields in Yuma Valley for the alfalfa weevil. Rumors, coming from a supposedly reliable source, were to the effect that the weevil existed in Yuma Valley. In a thorough search, however, no weevils were found.

Mr. McLachlan left on the 22nd for Claremont, Cal., where he expected to spend a month in making some cotton plantings and in establishing field headquarters. His address will be Claremont Inn, Claremont, Cal.

Huntley.

The first three days of the week of May 4 were spent in preparing the ground in field B for seeding and in plowing alfalfa in field C.

The sugar beet plats in the irrigation rotation field were planted on the 29th.

The fruit trees for completing orchard planting were received on the 30th.

A rainfall of 1.37 inch which commenced Thursday prevented any outside work during the last three days of the week.

Scottsbluff.

During the week of May 4 field work progressed very slowly on account of the continuous high winds. At times it was almost impossible to do any outside work on account of the blowing soil. All of the grain that is up has been damaged more or less by the drifting sand, many of the blades being cut off.

The dry land grains were gone over with the weeder, and it was found that the land so treated did not blow as much as did that which was not harrowed.

The alfalfa plats on the irrigated rotation work are ready for seeding and will be put in as soon as a quiet day comes.

All of the small grain on both the dry and the irrigated plats is up and making good growth. About 3 acres of oats were seeded for use as feed.

11 May, 1912.

FIELD NOTES.

San Antonio.

During the week of May 4 the maximum temperature was 95, minimum 50; greatest daily range, 40; precipitation 0.55 inch.

Four plats of oats in the rotations were cut for hay on Friday, but have not yet cured on account of the rain. This rain, which was accompanied by considerable wind, caused some damage to the standing oats by lodging.

The first planting of grain sorghum varieties was thinned and cultivated; cotton was cultivated; several plats of sorghum and cowpeas were planted in the forage crop experiments, and the seventh planting of cotton in the successive planting block has made on May 2.

Weeds were mowed from the waste land at the south end of the farm with the idea of later securing a crop of Johnson grass hay from this land.

The early blight of potatoes is working serious damage in all potato fields about San Antonio, and many inquiries for a means of control are coming in to the station. Several hundred acres of potatoes have been planted on irrigated tracts in this locality this season, but never before has this disease produced severe injury to the crop and the growers are unprovided with spraying machinery.

Messrs. Cook, Kinsler and Wells arrived at the Farm Thursday, and Messrs. Mead and Clark on Friday. The cotton plants in the thinning experiments are of sufficient size to afford study and these gentlemen will follow this work closely.

Williston.

Mr. Hawley reports a late spring, with so much rain that the farmers are delayed in getting in their crops.

11 May, 1912.

FIELD NOTES.

Truckee-Carson.

During the week of May 4 the maximum temperature was 68, minimum 30.

Twelve varieties of strawberries were planted on the ranch of W. W. Cogswell at Fernley.

The heating plant for the greenhouse has been installed. The benches have been set and the greenhouse is now ready for use.

The winds on Monday, April 29, did considerable damage in the variety testing plats on Fields D and F. The variety tests of grains were damaged most, probably 50 per cent of the stand being destroyed. This is the highest wind that has been recorded for a period of 24 hours since records have been kept at this station, the average velocity being 19 miles per hour.

The Chinese balsam poplar, S. P. I. No. 22447, was the first tree to come into leaf in this section. This is at least three or four weeks ahead of the cottonwood and Carolina poplar trees.

Belle Fourche.

The maximum temperature during the week of May 4 was 75, minimum 33; precipitation 1.15 inches.

The wheat and oats plats in the irrigation rotation experiment have been seeded. Plats 23 to 35 on Fields A-II and A-III and plats 1 to 8 on field H-III have been disked and harrowed. The oats planting on Fields C and P has been partially completed.

Mr. Dillman's alfalfa varieties and brome grass nursery have been planted. Mr. Dillman has started his experiment to determine the moisture requirement of different strains of alfalfa, including M. falcata, Grimm alfalfa, and two line-bred strains of M. sativa.

Mr. Salmon's grain varieties on A-III-35 and 36 and H-III-I to 7 have been planted.

During the week there were received from the Forest Service 1980 each of the green ash and American elm seedlings, which will be planted in the forestry plat.

4th May, 1912.

FIELD NOTES.

(Belle Fourche, continued).

On Monday Mr. Carr secured on Horse Creek flowering material of many of the native shrubs, and later in the week made a two-day trip to the Sturgis Valley, securing flowering material of several forms of Ribes, Crataegus, Populus, Salix, Fraxinus, and Acer, also about twenty other species of the native plants of the valley. At least three distinct forms of Ribes were noted in this locality.

OUTSIDE PUBLICATION.

On pages 43 and 44 of this issue will be found the full text of a Memorandum for Heads of Offices concerning requests for permission to publish articles or papers outside of the Department.

MR. SCOFIELD'S ITINERARY, TRIP OF MAY 13.

			Address.
Leave	Washington	May 13	
Arrive	Fallon	17	Care Mr. F. B. Headley
Leave	"	21	
Arrive	Stockton	22	Stockton Hotel
Leave	"	26	
Arrive	San Francisco	27	St. Francis Hotel
Leave	" "	29	
Arrive	Los Angeles	30	Hayward Hotel
Leave	" "	31	
Arrive	Imperial Valley	June 1	
Leave	" "	2	
Arrive	Bard	3	Care Mr. W. A. Peterson
Leave	"	6	
Arrive	Portland	9	Portland Hotel
"	Hermiston	10	Care Mr. R. W. Allen
"	Bozeman, Mont.	15	
"	Osborn, Mont.	16	Care Mr. Dan Hansen
"	Fargo, N. Dak.	21	Waldorf Hotel
"	Minneapolis	33	RFD.No.1, Care Mr. R. J.
"	Washington	27	Kelley

11 May, 1912.

SPECIFICATIONS FOR PORTLAND CEMENT.

The following Executive Order is published as General Order No. 152 for the information and guidance of the officers and employes of the Department of Agriculture.

"EXECUTIVE ORDER.

"It is hereby ordered that all Portland Cement that may hereafter be purchased by any Department, Bureau, Office, or independent establishment of the Government, or that may be used in construction work connected with any of the aforesaid branches of the Government service, shall conform in every respect to the specification of Portland cement adopted by the Departmental Conference at the meeting held at the Bureau of Standards on February 13, 1912, and approved by the heads of the several Departments (to be known as the United States Government Specification for Portland Cement): Provided, however, that such specification may be modified from time to time by any similar Departmental conference, with the approval of the heads of the several Departments."

"WM. H. TAFT.

"The White House, April 30, 1912."

This Order is hereby promulgated for the information and guidance of all concerned in this Department.

James Wilson, Secretary."

The specifications referred to are fully set out in Circular No. 33, of the Bureau of Standards, copies of which can be secured through this office. It is suggested however, that, as it would be impracticable for farm superintendents to apply the necessary tests, probably the most feasible way to secure Portland cement of the required standard would be to demand of dealers in each instance a written guaranty that the product conforms in every respect to the United States Government Specifications for Portland Cement.

United States Department of Agriculture,
Bureau of Plant Industry.

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Office of Chief of Bureau.

Washington, D. C., May 2, 1912.

MEMORANDUM FOR HEADS OF OFFICES, No. 17.

Gentlemen:

Considerable misunderstanding seems to exist regarding the points necessary to be covered in requests addressed to the Honorable Secretary for permission to publish articles or papers outside of the Department, and for the future guidance of those who may wish to secure such permission, which must be obtained in all such cases, the following general form of application should be used, the details being changed to suit the needs of each particular case.

Hon. James Wilson,
Secretary of Agriculture,

Sir:

I have been requested by the publishers (or editor) of the (indicate the journal or magazine) to prepare for that journal an article concerning (indicate the subject) for which remuneration is offered.

With your permission I should like to prepare the article in question. The matter proposed to be used in this article has already been fully covered in Department publications (or the matter proposed to be used in this article is of such a nature that it would not be suitable for publication within the Department), and the article will be prepared outside of office hours and in such a way that it will not interfere in any way with my official duties.

Very respectfully,

Recommended for approval: (signature and title)

Chief of Bureau.

Approved:

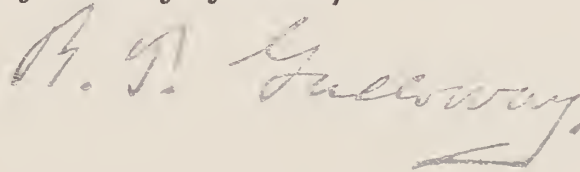
-2-

In submitting such letters a signed carbon copy should be sent to the Office of the Chief of Bureau.

It will be understood that where no remuneration is involved, application for permission to publish should be made to the Chief of the Bureau, and such applications should follow the general form given above.

If attention is given to the form of application in each case much of the present delay will be avoided.

Very truly yours,

A handwritten signature in cursive script, appearing to read "H. G. Galloway". The signature is written in dark ink and is positioned below the typed name.

Chief of Bureau.

NOTE:

Copies should be sent to all field men.

18 May, 1912.

BUREAU ORTHOGRAPHY.

Memorandum for Heads of Offices No. 18, dated May 13, 1912, advises of the creation of an Advisory Committee on Scientific and Technical Orthography, consisting of Messrs. Fairchild (Chairman), Swingle, Coville, and Cook, whose duty it shall be "to consider and determine all questions which may arise within the Bureau concerning proper spelling of botanical names; to pass upon popular names proposed to be given to new introductions; to see that correct geographic names are applied in accordance with the rules of the Board of Geographic Names; and to decide as to the proper use of technical and semi-technical terms in connection with the work of the Bureau." The decisions of this committee are to be subject, however, to the final decision of the Chief of the Bureau when necessary.

FIELD NOTES.

Yuma.

During the week of May 4 the minimum temperature was 42, maximum 91.

The Egyptian cotton planting in San Pascual Valley, exclusive of the Experiment Farm, now totals 65 acres. This practically completes the planting for this season.

The transplanting of seedling date palms from the Reclamation Service grounds to the farm roadway has been continued.

The second crop of alfalfa was harvested from A 1 to A 8.

The cotton plantings have all been staked, and stakes have also been made for all field plats that are leveled.

Mr. L. H. Dewey stopped over for a day on the 3rd and inspected the ramie plantings.

18 May, 1912.

FIELD NOTES.

Umatilla.

During the week of May 4 the maximum temperature was 71, minimum 32; average wind velocity, 5.2 miles per hours.

Some additional varieties of strawberries were set in the variety test plat.

The missing places in the poplar windbreak on the west side of the farm have been filled in with young trees.

The cane fruits, grapes, and asparagus patches were cultivated following the last irrigation.

A fairly thick stand of rye that volunteered in the yard was mowed out to give the clover a chance to cover the ground.

Scottsbluff.

During the week of May 11 alfalfa was seeded on the irrigation plats, and alfalfa and clover on the dry land.

The borrow pits on the east and south sides of the farm were plowed and worked down as much as possible and seeded to alfalfa and brome grass.

About 2,500 forest seedlings were set out north of the orchard and near the corral, and more than 3,000 cuttings of various kinds were set out in nursery rows.

On Friday and Saturday potatoes were planted. All of Prof. Corbett's potatoes were planted and the plats on the irrigated rotations were put in.

The carpenters completed the work on the buildings Saturday and painting will begin as soon as the weather becomes settled.

18 May, 1912.

FIELD NOTES.

San Antonio.

The maximum temperature for the week of May 11 was 91, minimum 56; greatest daily range, 35. The total precipitation was 0.91 inch, the greater part of which was on Sunday, May 5.

All of the corn, cotton, sorghum, orchards, and nurseries on the farm were cultivated after the rain.

The grain sorghums and broomcorn of the second and third successive plantings and the milo on the rotation plats were thinned.

Oat hay from the rotation plats was drawn in, resulting in an average yield of 5,117 pounds per acre. The plat making the highest yield was one planted successively to oats, being plowed as soon as the hay is harvested. The farm oats on field C6 were cut for hay.

The eighth successive planting of cotton on B4 was planted on the 9th.

Plats of Canada peas, S. P. I. No. 30134, which were left for seed, were pulled and piled. This variety along with several others was planted as a green manure crop in orchards. A minimum of 15 degrees above zero during the winter badly damaged all other varieties, while this one survived. These were tested as a table vegetable and found to be a good substitute for the garden pea, very palatable, although smaller and not quite so sweet.

Messrs. Meade, Clark, and Wells have been busy thinning and making counts of plants on the cotton thinning experiments.

Numerous flower crosses of plums have been attempted during the spring between various native species and cultivated varieties in the farm orchard. Some of the most interesting of those which have set fruit are crossed with the native *Prunus texana*, which is itself a wild sort with possible economic value, fair quality, attractive color, and a very pronounced, pleasant order. A fruit combining these qualities with size, productiveness, and vigor of some of the cultivated varieties would mean a plant of exceptional worth in south Texas orchards. The plum is doubtless best adapted of all deciduous fruits grown in this section.

18 May, 1912.

WEATHER RECORDS FOR APRIL.

	: Belle	: San	:	:
	: Fourche.	: Antonio.	: Yuma.	: Huntley.
Mean temperature	: 45.35	: 67.4	: 63.4	: 46.5
Maximum temperature	: 78.	: 90.	: 91.	: 78.
Minimum temperature	: 21.	: 38.	: 36.	: 20.
Rainfall	: 2.20	: 2.	: 0.16	: 2.
Aver. wind velocity	: 9.10	: 2.7	: 3.77	: 4.77
Days clear	: 19	: 12	: 20	: 10
Days partly cloudy	: 5	: 10	: 9	: 8
Days cloudy	: 6	: 8	: 1	: 12
	:	:	:	:

FIELD NOTES.

Williston.

Mr. Hawley reports a cold and backward season, the farmers having difficulty in getting their crops in, and those now in not doing well.

Alfalfa has badly winter killed in spots. Mr. Hawley lays this to the extreme freezing depth, which in places was five to six feet, as in places where the snow was piled deep the alfalfa seems to be in good shape.

Umatilla.

During the week of May 11 the maximum temperature was 86, minimum 35; average wind velocity, 4.1 miles per hour.

The team has been busy preparing the land in fields C 1-A to C. The heavy growth of rye and vetch on this land was difficult to cut up and plow in and the work has been slow.

A variety test of potatoes was planted. This includes eight varieties sent from the Department and three western-grown varieties. A miscellaneous assortment of garden truck was planted for the determination of certain cultural treatments and the adaptability of varieties.

25 May, 1912.

FIELD NOTES.

Truckee-Carson.

During the week of May 11 the maximum temperature was 77, minimum 36; precipitation, 0.43 inch.

Prospects are excellent for a good apple and pear crop this year, as only the earliest blossoming varieties were caught by the last severe frost, which occurred on the night of April 21.

A fertilizer test with potatoes was planted on the Experiment Farm and on the ranch of Dr. T. F. Richardson.

The variety test of beans was seeded in field N-12, and several vegetable tests were planted in the garden.

The variety testing plats of Fields D and F, which were so severely damaged by the high winds of April 29 and 30 as to ruin the tests have been reseeded. In each case where the seed was available each plat was seeded to the same crop as had previously been planted in it.

Huntley.

During the first two days of the week of May 11 no field work could be done on account of wet ground.

Flax and alfalfa plats on dry-land rotation field were planted, as were also flax, alfalfa, and potato plats on the irrigated rotation field. Seven plats in Field A-III were planted to alfalfa, and the remainder of the time was spent in preparing land for seeding in fields B, C, and E.

Water was turned into the canal on May 10.

25 May, 1912.

FIELD NOTES.

Scottsbluff.

During the week of May 18 all of the corn and sorghos were planted on both the dry and the irrigated land, and after planting the corn was harrowed.

The millet varieties on the dry land were seeded. The soil was in very good condition, having enough moisture to germinate the seed.

A number of cement checks have been put in, and on Saturday a half foot of water was ordered for the farm, in order that the ditches might be tried and reinforced where necessary. If the weather continues as in the past few days water will be run on the alfalfa during the coming week.

The potatoes on the irrigated rotation plats were cultivated and harrowed, and the sugar beets were gone over with the weeder to break the crust that had formed on the surface.

On the 14th the thermometer registered 30 degrees at the station, and at several other points in the project as low as 28. This cold weather damaged a considerable part of the early seeding of alfalfa. It also seems to affect the sugar beets a little, as after the frost all those plants that had just broken through the soil dropped the cotyledons and died off.

Belle Fourche.

The maximum temperature during the week of May 18 was 80, minimum 35; precipitation, none.

During the week the corn and potato plats in the dry-land rotation experiment were disked, harrowed and planted. In the irrigation rotation experiment the corn, potato and alfalfa plats were prepared for seeding.

The lawn has been seeded to a mixture of white clover, blue grass and perennial rye.

In the small fruit plat 1,236 strawberry plants, of 7 varieties, and 113 raspberry plants, of 3 varieties, have been planted. Five hundred additional American elm seedlings have been planted in the forestry plat.

25 May, 1912.

ESTIMATES FOR FISCAL YEAR 1913.

Each farm superintendent should at once submit an estimate of the amount of money needed by his station for the fiscal year 1913. This estimate should be itemized as fully as possible under the following heads: Salaries (under appointment); labor (under authorization); travel; permanent equipment; supplies; and miscellaneous.

PERSONAL.

Mr. M. A. Carleton, in Charge of the office of Grain Investigations, has been granted a furlough from June 15, 1912, to June 30, 1913, and during that time will act as General Manager in charge of the work of the Pennsylvania Blight Commission, with headquarters at Philadelphia. During his absence Mr. Ball will act as Cerealist in Charge.

Mr. Hastings left Washington for San Antonio May 16.

Mr. Kearney left Washington May 22 for a field trip. His proposed itinerary includes Akron, Colo., Salt Lake City, and Newell, S. Dak.

1 June, 1912.

FIELD NOTES.

Williston.

In his report for the week ending May 18, Mr. Hawley reports the weather cold and rainy, with wheat doing very well, but too cold for anything else. So far this season it has not been found necessary to irrigate any.

San Antonio.

During the week of May 18 the minimum temperature was 47, maximum 92, greatest daily range, 38. Very little rain fell, the total precipitation for the week being 0.18 inch.

The farm oat hay on C6 was drawn in. The total yield on 4.29 acres was 19,960 pounds, or 2.33 tons per acre.

The oats for grain on the rotation plats were cut; also the one-acre seed plat on C6. Although the oats had lodged badly, the binder did fairly satisfactory work, getting nearly all the grain, but very little straw.

The rye on B3 was also bound and shocked.

The cotton on the Herbst field was cultivated Monday, and during the latter part of the week the men were busy hoeing weeds from the cotton, sorghum and corn on the rotation plats.

Messrs. Blair and Gage made a collecting trip between San Antonio and Boerne Friday and Saturday, securing several very good flowering specimens, including principally Nolinias and yuccas.

Huntley.

During the week of May 18 potatoes and corn were planted in the irrigation rotation field and corn in the dry-land rotation. Alfalfa was planted in field A-I and B-II and III, beets in B-VI-VII, and oats in C.

1 June, 1912.

FIELD NOTES.

(Huntley, continued)

Fruit trees were received to complete planting of orchard tract.

Part of the rye in field MI (Worden Tract) was plowed under.

Yuma.

During the week of May 11 the maximum temperature was 89, minimum 45.

The last of the seedling date palms were brought out from Yuma.

Three 100-gal. drums of crude oil were purchased from the Reclamation Service to be used in preservative treatment of willow fence posts. Work was begun on the construction of a fence around the farm.

Mr. W. A. Peterson left on Thursday for Tempe, Ariz., to assist in removing date palm offshoots for the Yuma Farm.

Mr. O. F. Cook arrived in Thursday from Washington.

The maximum temperature during the week of May 18 was 100, minimum 47.

The leveling of the roadway on the south side and work on the fill in the northwest corner of the farm have been continued.

The hybrid cotton cuttings which were cut last December and carried through the winter months in a dormant condition were planted on the east half of D17.

Alfalfa seed received from Chas. H. Clark was planted on A13-4, as was also seed secured from Peruvian x Turkestan alfalfa hybrids.

Plat D23 has been planted to cotton.

Umatilla.

The maximum temperature during the week of May 18 was 91, minimum 38.

An extensive planting of tomatoes was made to determine if possible which varieties have the greatest power to resist the "Western tomato blight" and also to determine what effect different methods of handling have on their vitality.

1 June, 1912.

FIELD NOTES.

(Umatilla, continued)

Strawberries have begun to ripen; the first to mature being Clark's Seedling, Poco Moke, and Sharpless. The yield will be very light on most varieties.

The fall-sown rye throughout the orchard plots has attained a good height and has been partly worked into the soil.

Irrigation was continued throughout the week.

Truckee-Carson.

In his report for the week ending May 18, Mr. Headley gives the following summary of results in an experiment with alfalfa in rows (Field F15):

The rows are (estimated) 240 feet long and 30 inches apart. The seed was planted with a garden drill April 21, 1911. The first cutting was merely a clipping and the weight was not recorded. The second and last cutting was made on August 9, 1911, with the following result.

Row.	Variety.	Yield 1st Series. (pounds)	Yield 2nd Series. (pounds)
1	Caucasus	not cut	8.5
2	<u>M. ruthenica</u>	no growth	no growth
3	Arabian	11.0	14.5
4	Peruvian	24.0	21.0
5	Grimm	17.5	15.5
6	Sand Lucerne	16.5	12.5
7	Turkestan	15.5	13.0
8	Montana	18.5	13.5
9	Canadian	19.0	13.0
10	Western Grown	17.0	15.0
11	Provence	19.0	11.5
12	Elche	19	12.5

FIELD NOTES.

(Truckee-Carson, continued)

There was good later growth in the fall and the varieties all came through the winter in good condition and are now from 18 to 30 inches high. The plat has been irrigated once this spring and has been cultivated. As a whole, the field looks better and more even than the nearby fields that were seeded in the ordinary manner.

A number of garden vegetables were planted, including melons, squash and pumpkin.

The variety test of corn was planted on field F2.

The southeast corner of Field C has been leveled and planted to a variety test of sorghum.

Cabbages and tomatoes were transplanted from the hotbed to M12.

Mr. Scofield arrived at the station on the morning of the 17th.

Maximum temperature, 85; minimum, 38.

Scottsbluff.

During the week of May 25 there was precipitation of 0.9 inch, 0.72 inch of which fell one evening in a very short time. This rain did more harm than good to many of the farmers and to crops in general. Much of the seeding was about to come through the soil, but the driving rain beat the surface and caked it to such an extent that alfalfa and sugar beets cannot come through. On account of the advanced stage of small seedlings, the land cannot be harrowed, as it would destroy the sprouts just beneath the surface.

Flax was seeded during the week on both the dry and irrigated land, the soil being in excellent condition.

CORRECTION.

Mr. Hastings calls attention to the fact that in the Weekly Bulletin of May 18 the average yield from the oat plats in the rotation fields was given as 5117 pounds per acre, whereas it should have been 5632.

1 June, 1912.

FIELD NOTES.

Belle Fourche.

During the week of May 25 the maximum temperature was 81, minimum 43; precipitation, 0.91 inch.

The corn and potato plats in the irrigation rotation experiment have been planted and the variety tests of corn on Field F-I have been seeded.

In the orchard the following fruit trees have been planted: APPLES. 20 Oldenberg, 20 Wealthy, 20 Longfield, 20 Northwestern, 20 Kaump, 5 Yellow Transparent, 3 Hibernial, 3 Ben Davis, 3 Day, 3 Evelyn, 6 Plumb Cider, 4 Patten, 3 McIntosh, 3 Peerless, and 3 Milwaukee; CRABS. 3 Whitney, 3 Hyslop, 3 Red Siberian, 3 Florence, and 3 Transcendent; PLUMS. 4 Terry, 8 Wyant, 4 Lombard, 8 Forest Garden, 8 Wolf, 4 De Soto, 3 Anisine, and 4 Surprise; CHERRIES. 4 Wraggy, 4 Montmorencie Ordinaire, 8 Orthein, and 12 Suda.

In the small fruit plat the following have been planted: Raspberries. 35 Cuthbert, 30 Sunbeam, 40 Marlboro, 39 Loudon, and 38 Miller. Blackberries. 43 Snyder, 29 El Dorado, 41 Stone Hardy, 65 Rathbun, and 41 Ancient Britain. Currants. 47 Fay's Prolific, 47 Red Dutch, 47 White Grape, 150 Prince Albert, 51 London Market, and 48 Perfection; Gooseberries. 30 Houghton, 41 Industry, and 33 Champion.

A No. 8 Manlove self-opening gate has been installed at the eastern entrance to the farm.

Messrs. Oakley and Carver visited the farm on Wednesday and Thursday, and Mr. Smith, of the Forest Service, on Saturday.

Mr. Carr made a trip to the Sturgis Valley the latter part of the week, returning with flowering specimens of about 30 additional species of the native plants.

Huntley.

During the week of May 25 alfalfa in field C and B-Iv was given the first irrigation; the seeding of alfalfa in Field B was completed; and irrigation ditches in fields A and B were cleaned.

A rainfall of 0.84 inch on Monday and Tuesday prevented any outside work during the first part of the week.

Prof. F. B. Linfield of the Montana State Station visited here Saturday morning.

1 June, 1912.

FIELD NOTES.

Yuma.

During the week of May 25 the maximum temperature was 98, minimum 49.

Fifty date palm offshoots, including 26 Rhars and several other varieties were received from the Tempe Date Orchard on the 21st. The cut surfaces were treated with an asphaltum cement and the offshoots planted in nursery rows on A 11-2, where they can be irrigated with pumped water. The offshoots that grow will be transplanted into the date orchard next spring.

The 5-acre fig orchard has been pruned. Last winter most of the trees froze back to the ground and in beginning growth this spring they put out a large number of branches. In pruning one branch was left to form the body of the tree.

The thinning of the cotton plantings has been continued under Mr. Cook's directions. The development of the large basal vegetative branches has been checked or eliminated through the maintenance of a continuous shade in the row by successive thinnings.

The second crop of alfalfa was harvested from the alfalfa plats on B, C, and D series.

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SUPPLIES.

In the matter of requisitions for supplies the lines are being drawn so closely that it is almost impossible to purchase anything that is not under contract. Where non-contract items are desired the request for requisition must be accompanied by a memorandum explaining fully why no contract article will answer the purpose, and stating that the exigencies of the service do not permit of the delay necessary to place the articles under contract. Such requisitions are referred to the Treasury Department before the goods can be ordered, with a consequent delay of several weeks and much uncertainty as to whether the requisitions will ultimately be approved.

1 June, 1912.

(Supplies, continued)

Regular stock supplies, such as letter heads, typewriting and scratch paper, envelopes, pencils, pens, erasers, carbon paper, rubber bands, paper clips, typewriter ribbons, etc., can always be secured without delay, and all ordinary kinds of stationery and office supplies can be secured within a reasonable time, provided some latitude is allowed as to brand or make, exact shape or size, weight, color, ruling, binding, and other similar details.

It is impossible to secure articles in the open market when there are under contract others at all similar or which may be used for the same purpose. For instance, the Standard Memorandum books, which have been regularly used in this division for years, can no longer be purchased, but contract notebooks must be used instead, though of different dimensions, binding, etc.

In view of the difficulties caused by these rules, the following suggestions are made:

(1) So far as practicable, it would be well to purchase locally, or elsewhere than in Washington or through the Washington office, such supplies as might be secured with more or less difficulty through the Washington office, provided this does not involve the payment of relatively high prices.

(2) In requesting supplies, state the use to which they are to be put, if that is not evident from their nature, and say whether any similar contract item would be satisfactory, i. e., whether substitution would be permissible. If only the identical article ordered will serve, explain exactly why, so that the statement may be used in getting the requisition for the article approved, if it does not happen to be under contract.

If possible, a contract book will be sent to each of our field stations, but it is doubtful whether the extra copies can be obtained.

8 June, 1912.

Mr. F. D. Farrell assumed his duties in the office June 1 and is acting as Agriculturist in Charge during Mr. Scofield's absence.

FIELD NOTES.

Umatilla.

During the week of May 25 the maximum temperature was 86, minimum 44; average wind velocity, 4.5 miles per hour.

A rainfall of 0.8 inch on Saturday, together with a few damp days, has helped the crops greatly.

An area has been partially prepared for soil moisture determinations by putting in a flume and mowing off the rye. Some additional work was done in disking in the rye in the orchard plats that was partly covered the first time over. Some additional garden planting was done and the first plantings hoed.

Williston.

Mr. Hawley worked during the past week with the farmers at Buford. Most of the old settlers there have sold out and the new ones are more energetic than their predecessors.

So far there has been an abundance of rain and the pumps have not been started, but if the weather continues dry to the 15th, water will probably be run at that time. The season has been very backward.

A large number of fruit trees are dead this spring, due to the bark having been knocked off by hail last summer. All the small fruits are doing well.

8 June, 1912.

FIELD NOTES.

Truckee-Carson.

During the week of May 25 the maximum temperature was 79, minimum 29. On the 21st and 22nd the temperature fell below freezing and it was necessary to start the orchard heaters. The temperature was kept above the danger point.

Arrangements have been made with the Leete Ranch for cooperative experiments with beans and potatoes. During the week twelve varieties of beans were planted on this ranch and the following varieties of potatoes: Early Ohio, Burbank, Green Mountain, Extra Early Triumph, Early Rose, Colorado Mammoth Pearl, and Rural New Yorker.

The newly leveled portion of Field C was given its first irrigation.

A large portion of the week was spent in removing weeds from the garden plats.

What appear to be three different species of insects were noted infesting the sugar beets on Field F. Specimens were sent to the entomologist at the University of Nevada for identification.

Mr. Headley made a trip to Fernley in connection with the different experiments at that place. He was accompanied by Mr. Scofield. After looking over the experiments, Mr. Scofield departed for California points.

Huntley.

In his report for the week of June 1 Mr. Hansen says that the unusually high rainfall during May has left the ground in good condition for starting crops and in most cases a good stand has been secured. Grain, especially, is doing well, but the weather has been rather cool for some of the other crops.

Alfalfa and other forage crops in Field A were irrigated for the first time.

The plats on the Worden tract have received their first irrigation. On the heavy ground on this tract it has been impossible to do much work until recently because of wet weather, and farmers in that vicinity have experienced considerable difficulty in getting ground in condition for planting.

Huntley (continued)

The winter rye on the Worden tract is making good growth and will make a heavy crop for turning under.

Scottsbluff.

Mr. Knorr reports that the first part of the week of June 1 was the hardest on growing crops that he has ever known. For three days beginning on Sunday the wind blew a gale, and again on Thursday a terrific wind storm prevailed. The damage done to crops in the Valley cannot be estimated at this time. The most reliable reports come from the beet growers, who have reported a loss of more than 3,000 acres of beets due to blowing out and cutting off by the wind. Four acres of beets on the Experiment Farm that had been cut off by the wind were reseeded.

Mr. Link, of the Nebraska State Station, arrived at the Farm during the week for the purpose of establishing permanent headquarters for the study of potato diseases. Two acres of potatoes have been planted, with various treatments of the cut seed.

Some of the potatoes that are out of the ground show traces of the disease that affected the crop last year, and there are also a number of beet fields where the beets are showing a disease that appears to be very similar to that which affected the potatoes.

The alfalfa is being irrigated, as are also the trees and cuttings set out this spring.

Truckee-Carson.

During the week of June the maximum temperature was 90, minimum 35.

An experiment was tried with a view to breaking the hardpan underlying plat Y-21a, so as to get a downward movement of irrigation water. The soil is ordinarily impervious to water. Dynamite was placed at a depth of 5 to 5 feet, this being about the depth of the hardpan. The result was very satisfactory, an area of about 8 feet in diameter being loosened with each explosion.

The sugar beet variety tests were thinned and cultivated.

8 June, 1912.

FIELD NOTES.

Belle Fourche.

Maximum temperature for the week of June 1 was 84, minimum 39; precipitation 0.09 inch.

During the week work has been done in the leveling and ditching of fields O and P for irrigation, and in putting in the drops for irrigating the rotation experiments. In the irrigated rotation experiment the clover, corn, barley, flax, and alfalfa have been seeded. Fields O and P have been disked, as has also the orchard; the plats of brome grass have been cultivated, the alfalfa, clover, and flax plats in the irrigated rotations have been dragged, and the summer fallowed plats in the dry-land rotations spring toothed.

The grains planted this spring are all up and have an excellent stand, and the corn is coming up in good shape. The ground is, however, rapidly becoming very dry.

One hundred 6-foot American elm seedlings have been set out along the driveway to the east gate of the farm.

Umatilla.

Precipitation amounting to an inch, which fell during the first part of the week ending June 1, was of great benefit to the Umatilla Project, especially to the dry farming districts in the vicinity.

The work on the Experiment Farm during this week was of miscellaneous character.

San Antonio.

A rain which began on Saturday afternoon, June 1, and continued through the night, amounted to 1.41 inches. This rain came at a time when it was needed by the crops. The maximum temperature during the week was 103°.

The rye, oats and Canada field peas were thrashed May 28 and 29. 14 bushels of Canada field peas, SPI No. 30134, were secured for seed. The oats on the rotation plats yielded reasonably well, the average being 26.4 bushels per acre, and the maximum, from a summer fallowed plat, being 37 bushels per acre.

15 June, 1912.

EXPRESS CHARGES.

It is requested that farm superintendents, when notifying the Washington office of liabilities for express charges, will always give the date of delivery.

FIELD NOTES.

Williston.

Mr. Hawley reports the weather still cold and rainy during the week of June 8, with no crops except small grains doing very well.

Scottsbluff.

Mr. Knorr reports that during the week of June 8 beet thinning was finished on all plats where the beets were large enough. It was found necessary to replant about three more 1/4 acre plats where the wind had whipped out the plants.

During the previous week irrigating was done with one foot of water. Beginning with Monday of this week two feet were used, running two heads, and on Saturday a third foot was called for. It is impossible to use a very large head of water for irrigating the field plats without running too much waste water on to the neighboring land. Irrigating with these small heads requires more help, but considering everything it is advisable to do so.

The winter wheat was irrigated during the week, the alfalfa is almost finished, and irrigation of the small grains on fields H and K was started Saturday.

FIELD NOTES.

COMPARATIVE WEATHER RECORDS FOR MAY.

	Truckee- Carson.	Belle Fourche.	San Antonio.	Huntley.
Mean temperature	56.40	55.55	71.70	55.50
Maximum temperature	86.00	84.00	103.00	90.00
Minimum temperature	29.00	32.00	47.00	32.00
Rainfall	.43	2.31	1.64	2.44
Av. wind velocity	5.30	11.22	3.23	4.98
Days clear	22		14	13
Days partly cloudy	5		14	12
Days cloudy	4		3	6

Belle Fourche.

During the week of June 8 the maximum temperature was 80, minimum 45; precipitation, 0.03 inch.

Mr. Dillman's test plats of alfalfa on C-I to C-IV, the sorghos on C-IV, and the millets on G-II-III-IV were seeded, as was also the alfalfa on fields O and P.

The men have been thinning alfalfa on field C, cleaning alleys in the dry-land rotations and the grass and alfalfa nurseries, and hoeing weeds. The gumbo weed, Iva axillaris, is becoming very troublesome this summer.

Additional work has been done on the drops for irrigating field A, and the water will soon be taken to the plats. The first irrigation water of the season was received Friday and the orchard and small fruit plats were irrigated.

15 June, 1912.

FIELD NOTES.

Truckee-Carson.

During the week of June 8 the maximum temperature was 96, minimum 50.

The alfalfa fields are out in full blossom and many of the farmers anticipate cutting during next week. The alfalfa is being irrigated and as soon as the soil is sufficiently dry hay making will start.

The variety tests of wheat on Field F-6 & F-7 are doing nicely and making good growth. Arnautka and Ghirka to date have made the best growth.

A set of photographs is being taken of the different varieties of trees, flowers, and shrubs grown on the project. These will be made into lantern slides and used in connection with lectures.

TRANSPORTATION REQUESTS.

Attention is invited to the following circular issued by the Officer in Charge of Records under date of June 1:

"As transportation requests issued on 1912 appropriations are not good after June 30, 1912, you are requested to return without delay any unused 1912 transportation on hand July 1 to this office for cancellation. Until all 1912 transportation is accounted for no vouchers payable from the appropriations for the fiscal year 1912 will be approved for payment in case of any man who is delinquent.

By direction of the Assistant Chief of Bureau."

THE UNIVERSITY OF CHICAGO
LIBRARY
540 EAST 57TH STREET
CHICAGO, ILL. 60637
TEL. 733-4331

22 June, 1912.

FIELD NOTES.

Umatilla.

The maximum temperature during the week of June 8 was 94, minimum 43.

The first crop of alfalfa was cut from the fields and plats in which it is being used in soil building and other tests.

The rye that was grown on idle land about the place was also cut to prevent its seeding again.

The alfalfa and weeds were cut along the flumes and ditches, and some cleaning up done about the place. All the land devoted to fruit culture was cultivated and rowed off for the next irrigation.

San Antonio.

During the week of June 8 the maximum temperature was 93, minimum 66, greatest daily range 27; precipitation .11 inches.

Following the rain of June 1, all of the corn, sorghum, and cotton was cultivated during the first part of the week. Plats A6-6 and A6-7 were plowed and A6-11 was subsoiled. Orchards B3 and A3, which were in Canada field peas, were disked and put in a condition for clean cultivation.

Monday was too wet for field work and the men were kept busy on the grounds, in the greenhouse, repairing fences, etc.

The rain of last week proved of much benefit to the crops. The indications now are that there will be a good corn crop, the largest for the past three years. The grain sorghum varieties are heading and flowering, and no midges have been found up to this time, so that the yields this season should be even better than last.

Considerable damage is being done to crops, especially cotton, by the "Hubber grasshopper," Brachystola magna, as determined by Professor Webster. The nearest point to the farm that they have been observed is about six miles north of San Antonio, but they are slowly working southward. The farmers up to the present time have been killing them with clubs, but an effort is being made to have them try poisoning the locusts with the Criddle mixture.

FIELD NOTES.

San Antonio (continued).

The earliest plums in the variety orchard on Al are ripening. A very good crop will be produced this year, and of excellent quality. Also the earliest peaches are ripening fruit. Many northern varieties of peaches which have never before borne fruit in this section are fruiting this season, probably due in part to the unusual lack of warm weather in the late fall and early winter.

Messrs. Hastings and Blair made a three-day collecting trip to Llano county, Texas, in quest of fruit of marked bushes of Prunus texana which are of exceptional quality.

Yuma.

During the week of June 8 the maximum temperature was 114, minimum 58. On five days the maximum was 110 or over.

All field crops are progressing satisfactorily. A third cutting of alfalfa yielding about one ton per acre was taken from A 1-9 and the field then renovated.

Fence construction around the farm has been continued.

Messrs. Scofield, Brand, Swingle, McLachlan, and Johnson, the latter of the office of Grain Investigations, visited the station during the fore part of the week.

Messrs. Cook and Gilbert were in Los Angeles and vicinity for a few days.

Belle Fourche.

During the week of June 15 the maximum temperature was 88, minimum 39; precipitation 0.12 inch.

The field operations for the week consisted mainly in constructing the field laterals and ditches on fields A and H, and O and P; in irrigating the orchard and small fruit plats and Mr. Salmon's grain plats, and in thinning alfalfa in field C.

Prof. Mathews, of Brookings, and Mr. Kearney arrived at the farm Saturday.

22 June, 1912.

FIELD NOTES.

Scottsbluff.

Mr. Knorr reports as follows for the week ending June 15:

The rye in dry-land rotations No. 14-15-54-114 and 115 was plowed under May 10. The ground was very dry and hard, but in spite of this the rye turned under better than was expected.

The fallow plats on the dry-land were disked. The corn was cultivated June 11, and there being a 0.53 inch rain on the 12th, it was cultivated again on the 14th. All of the corn was thinned out, on both the dry-land and the irrigated land.

The sugar beets were cultivated during the week. Cultivation of the potatoes was also begun, but was not finished by Saturday night.

Winter wheat is beginning to head out. Dry-land barley and wheat are in the boot and will head soon. All of the dry-land grain is standing very nicely and the prospects to date are for a good crop.

Two men irrigated most of the week and we hope to get through with all of the small grain either today (Saturday) or Monday.

1912 INVENTORY STATEMENTS.

The inventory statements on Schedules "A" and "B" should be made out and mailed to the Washington office immediately after the receipt of the regular monthly inventory statements for June. There will be issued later supplemental statements for June, but the annual inventory statements from the farms should not be delayed until these have been received. There has been mailed to each of our stations a supply of the inventory forms. In making out these statements the classification now current should be used. It is expected that a circular giving a re-classified list of all inventoriable articles will be issued some time during the coming fiscal year.

FIELD NOTES.

Yuma.

The maximum temperature during the week of June 15 was 101, minimum 58.

A census has been made of the figs on C-8 to 17 and all varieties labeled.

As a result of the continued high water in the river, the area to the south and east of the Experiment Farm is seriously affected by seepage. Many of the farmers have lost their entire crops through the rise of the underground waters. An extensive drainage system is essential before this area can be successfully farmed.

Mr. Peterson accompanied Mr. Bernard Johnson, of Mecca, Cal., on a trip through the upper end of Yuma Valley to assist him in finding a suitable location for a date orchard. Mr. Johnson recently imported 3,000 date offshoots, mostly of the Deglet Noor variety, from Algeria. These offshoots will be planted in Yuma Valley, provided land and other conditions are found favorable.

Mr. McLachlan spent Thursday at the Farm.

San Antonio.

The maximum temperature for the week ending June 15, was 100.5, minimum 59, greatest daily range 31. The total precipitation was .14 inch.

Plats A5-4, 12, and 16 were plowed and disked. Considerable labor was used in cutting, and all of the cotton which had not been gone over the previous week was hoed. The farm roads were cultivated and graded. All trees on the grounds were irrigated and cultivated. The nursery and garden on D3 were irrigated. The named varieties of plums and on A1 are ripening, and some fruit of very good quality is being produced.

22 June, 1912.

FIELD NOTES.

San Antonio (continued).

Mr. J. H. Kinsler was up from Victoria on Tuesday.

Messrs. Hastings, Meade, and Blair made a collecting trip to the Spring creek and Guadalupe river country northeast of Boerne, Texas, on Tuesday, Wednesday, and Thursday, securing flowering stalks of the native palm and several other valuable specimens.

Mr. David Griffiths, Mr. Beck, President of the Bexar County Farmers' Institute, and Sinclair Brothers visited the farm on Thursday. Dr. Griffiths is spending some time working with his cactus plantings at the Sinclair farm.

29 June, 1912.

FIELD NOTES.

Truckee-Carson.

During the week of June 15 the maximum temperature was 87, minimum 42.

A minimum temperature of 37 was recorded at the station on the night of the 15th, but no damage was noted at the Experiment Farm. Several farmers located in lower portions of the project report that the temperature fell to freezing and that considerable damage was done to the gardens.

The sugar beet fields that have been examined show no signs of "curly top", the disease that practically took the entire crop last year.

The central portion of the Y series was irrigated during last week. During this week it was disked, and as soon as the field is sufficiently dry it will be plowed. This field will be summer fallowed and in the fall will be seeded.

Prof. Brown, of the University of Nevada, visited the station on the 15th. He has been detailed by the University to study the eel-worm situation in this project, and will accompany Mr. Headley on a trip to the Pyramid Lake country during next week.

Huntley.

During the week of June 15 the grain plats in the irrigation rotation field were given the first irrigation. The thinning of beets in this field was completed, and part of the thinning done in the distance of planting and thinning experiment in field B. Plowing under eye in Worden tract was completed.

A rain of 1.1 inches fell during the latter part of the week. Before this grain on the dry land rotation field was beginning to suffer from drought.

29 June, 1912.

FIELD NOTES.

Umatilla.

The first full car of potatoes was shipped from the Umatilla Project during the week ending June 22.

Mr. Scofield and Professor Lewis, the Horticulturist of the Oregon State Station, visited the farm on June 19.

Upon June 20 a wind that averaged 58.8 miles per hour for two hours did a great deal of damage on the Project. Flumes were blown down, trees injured, and some buildings wrecked, and potatoes, onions, and other garden crops were blown out of the ground.

The maximum temperature for the week beginning June 16 was 102, minimum 47.

Scottsbluff.

During the week ending June 22 the weather continued cold, the maximum temperature being 81, and the minimum 39. Wheat is about the only crop that is making a normal growth.

Some of the wheat on the irrigated land is heading out.

The water was shut off on June 18, all of the grain having been irrigated and the alfalfa not requiring any more water.

The mower was started on the alfalfa June 21. As a rule the alfalfa is not cut till it is well in flower or a good second growth is started. This year neither is the case, due probably to cold weather, but the cutting could be no longer delayed, since the base of the stems was becoming woody and the lower leaves were beginning to drop.

29 June, 1912.

FIELD NOTES.

Belle Fourche.

For the week ending June 22, the maximum temperature was 89, the minimum 39, and the precipitation .01 inch. The effect of the drouth is plainly evident on all the dry land crops.

Huntley.

The weather continued warm and dry during the week beginning June 16. The dry land grains are beginning to suffer from the drouth.

Mr. Scofield and Mr. Cole reached this station on June 22.

29 June, 1912.

APPROPRIATION FOR FISCAL YEAR 1913.

Congress has adjourned till Monday, July 1, and the Agricultural Appropriation Bill for the fiscal year beginning on that date has not yet been passed. It is hoped that a continuing resolution will pass both houses upon July 1, extending all the appropriations of the now current 1912 bill for the first few days of the fiscal year 1913, at the rate of one-three hundred and sixty-fifth ($1/365$) of the 1912 appropriation for each day covered by the extension. Acting upon this presumption, an extension for the first 15 days of July of each of our regular operating authorizations has been requested, as follows:

S. H. Hastings	L. A. No. 1089	Amount, \$100.00
W. A. Peterson	1082	100.00
J. P. Irish, Jr.	974	50.00
Argyle McLachlan	3252	100.00
F. B. Headley	1088	100.00
R. W. Allen	1087	50.00
Dan Hansen	1090	100.00
Beyer Aune	1086	100.00

It should be borne in mind that these extensions, if granted, will practically constitute new authorizations under a new appropriation, and any balance left on an old authorization at the end of the fiscal year 1912 can not be carried over for expenditure under the extension.

Whether or not the continuing resolution is passed upon July 1, it is expected that salaries of regular employes, now under appointment, will be continued. No other expenditures will be allowed, however, until money has been appropriated therefor. No expenditures should be made, therefore, until information is received to the effect that either the bill or the resolution has passed and that the authorizations have been signed. In case it becomes necessary to suspend all work, or if any other crises in the situation develop, telegraphic information will be supplied immediately.

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